Pediatric Equipment Blueprint

What is the Equipment Plan?

Presentation By:
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Objectives  
Participants will…

– **Learning Objective 4**: Participants will utilize evidence available to justify clinical recommendations for adaptive equipment.

**Learning Objective 3**: Participants will demonstrate evidence based clinical decision making within a family centered model of care.

**Learning Objective 2**: Participants will be able to assess children for adaptive equipment beyond seating needs.

**Learning Objective 1**: Participants will be able to identify the children who may benefit from adaptive equipment to enhance their lives.

***Equipment that allows increased function in anticipation of life planning for the child***
Schedule

15 min – Identification of seating & non seating equipment options for children with complex adaptive needs including:

   Standing Equipment, Gait Trainers, Alternative Seating Options (classroom chairs, feeding chairs, floor sitters), Bathroom Equipment, Hospital Beds, Adaptive Tricycles, Combination Equipment Options

15 Min - Bringing Clinicians through the process of Prescreening & Evaluation for Functional Equipment

10 min - Building an Equipment Blueprint for each Child a case study with Discussion

10 min - Questions & Answers for Comprehensive Letter of Justification Review
Overview of Course

- Identification of Seating & Non Seating equipment options for children with complex adaptive needs in an educational setting
  - Power and Manual Wheelchairs / Strollers / Car Seat
  - Alternative Seating Options
    - classroom chairs, feeding chairs, floor sitters
  - Standing Equipment
  - Gait Trainers
  - Lift Systems
  - Bathroom Equipment
  - Adaptive Tricycles
  - Combination Equipment Options
- Bringing Clinicians through the process of Prescreening & Evaluation for Functional Equipment
- Building an Equipment Blueprint for each Child
Bringing Clinicians through the Process of Prescreening Evaluation for Functional Equipment & Building an Equipment Blueprint for each Child
Equipment Blueprint

• Child and Family have predictable needs
  – Life Planning
  – Current Equipment Available to Child
  – Outgrowth / Wear & Tear
  – Up coming Needs of Child (5 year plan)

• Always cognizant of…
  – Functional Potential (*don’t under estimate*)
  – Possible Declines in Function
  – Growth & Development
  – Additional Medical Needs
  – Insurance Restrictions

“I ask what the child needs…
Then consider all equipment options…
Then funding sources…
Then make a decision…”
Team Approach to Equipment Management

• Communication & Team Leader Approach

• Members?
  – Child & Family
  – Caregivers & Teachers
  – Therapists (PT, OT, ST, RT) & Medical Team (MD, RN)
  – Rehabilitation Technology Specialists
    • Manufacturer Representatives & Suppliers / Vendors
  – Identified Partners (dietitian, psychologist, etc)
  – Funding Sources
Pediatric Life Care Plan

• Types of equipment to consider include (Age Appropriate Equipment)
  – Wheelchair mobility
  – Bathroom and bedroom safety equipment
  – Therapeutic equipment
  – Aids for daily living
  – Recreational equipment
  – Augmentative communication and environmental controls
  – Computer interface and vocational accommodations

• Areas of Consideration…
  – Growth
  – Activity level
  – Changes in physical / cognitive function (due to therapies & aging)
  – Usability (weight of equipment, environment, surgical expectations, medical prognosis & Hx)
  – Safety
    • Awareness, Ability, Location – Bathroom, House, School, Community
  – Use in various settings with caregiver success
Principles of Seating & Positioning

• Support Postural Alignment
  – Provide Balance
  – Provide adequate BOS
    • create a platform for function
  – Prevent / reduce flexible (functional) deformities
  – Accommodate fixed (structural) deformities
  – Optimize Tone (does not have to be normal)
    • Hypertonic – decrease or inhibit excessive tone
    • Hypotonic – compensate or facilitate via positioning
Principles of Seating & Positioning

• Protect Skin

• Facilitate Function
  – How can this child make it through their day?
  – Mobility (power vs. manual)
  – ADL’s
  – Physiologic Functioning
    • Respiration
    • Digestion
    • Cardiovascular
    • Cognitive / Communication

• Comfort & Compliance is a medical necessity…
3 keys to the puzzle

• Identify the Problem
  – Gather information from all sources
  – Make your clinical observations

• Analyze the Problem
  – What is the cause(s) of the problem

• Determine the Solution
  – Plan a strategy for intervention
Seating Goals

• **PREVENTION GOAL**
  – Prevent abnormal postures, orthopedic deformities and/or pressure problems

• **CORRECTION GOAL**
  – Correct abnormal postures, flexible orthopedic deformities and causes of pressure problems

• **ACCOMMODATION GOAL**
  – Accommodate for abnormal postures and orthopedic deformities
Wheelchairs & Strollers

• Strollers
  – Compact, Collapsible, minimal postural support, Minimal to Moderate Modifications, Aesthetics

• Manual Wheelchairs
  – Postural support & correction, variety of seating options, self propellers

• Power Wheelchairs
  – Postural support & correction, variety of seating options, drivers (variety of control options)

***Ease of use is Key… Caregiver Transfers = Increased Carryover ***
Medical Justification of Walkers

- Functional Ambulation
  - Hand / Forearm Supported Walking
  - Requirements for external supports
    - Balance, Strength, Safety, Speed, Fatigue, Coord of Movement
    - Changes in Gait / Posture / Support
    - Transfers and Mobility
    - Sequencing of movement with external supports
  - Need to demonstrate use in ALL settings
  - Unable to ambulate household distances (<50 ft) or community distances (150 – 1800 ft) functionally
    - Site locations and limitations need to be considered
    - “what is functional for this child”
Benefits of Gait Trainers for Ambulation

- **Body Support Walker / Gait Trainer**
  - Standing, mobility, and social interaction
  - Use with children who lack trunk & arm control needed to use conventional hand-support walker

- **Support body weight through legs and walk short distances with physical assistance** of an adult are important outcomes…

- **Standing transfer with assistance of one person** improves the ease of care giver assistance and reduces the risk for care giver injury from lifting

- BMD, Circulation, Functional Mobility, etc…..
Medical Justification of Gait Trainers

• **Functional Ambulation**
  – Child is unable to use walker level of support in all areas of functional gait (i.e. Use in school / at home)
  – Requires supports greater than hand/forearm
    • Trunk, Ankle, Pelvic, Thigh, Head

• **Non Functional Ambulation**
  – Child may not be a primary ambulator
  – Use of Gait trainer for strengthening, WB, Functional UE use, social interactions, improvements in transfers, aerobic endurance, exploration of environment & change in position
Benefits to Alternative Seating

• Change in positioning every 2 hours
  – Respiratory & Skin Benefits

• Alteration in Alignment
  – Improve UE Function & Postural Control (head & trunk)
  – Feeding Positioning

• Variety of Positions
  – Vertical is Cognitively Alerting
  – Floor time with support for PLAY
  – Social Interactions
Medical Justification of Alternative Seating Options

• Primary Considerations…
  – Why child needs seating options beyond wheelchair?
  – What functional, educational, social, cognitive, physiological gains does this chair provide child?
    • Respiration, Muscle Elongation, Balance Reactions…
  – Safety during functional tasks (ie. Feeding)

• Secondary Considerations…
  – Does the equipment reduce transfers?
    • To floor (hi / low) or around environment (mobile base)
  – Does the equipment aide caregivers / provide safe positioning alternatives?
Benefits of Transportation Equipment

• Provide safe transportation to children with special needs
  – Post Operative Return Home
  – Access to School, Medical Appointments, Community Family / Friends

• Positional Support for children

• Wheelchair Transportation is sometimes the only option…

• Listing of available car seats…
  www.carseat.org/Pictorial/ColorPict,2010NP.pdf
Medical Justification of Transportation Equipment

• Safe Transportation to and from _______ is essential
  – School
  – Medical Appointments
  – Social, Religious & Family Gatherings

• NOT able to use any commercially available car seat
  – Requires additional supports
  – Outgrown size (ht/wt) requirements of commercial seat
  – Child is unsafe, unbuckles, behaviors in car make it unsafe for driver / other passengers
  – Does not have w/c accessible vehicle
Benefits of Bathroom Equipment

• Provide a safe environment
  – Transfers, Positioning, Successful Performance

• Maximize independence & Safety with ADLs
  – Showering, Bathing, Toileting

• Decrease level of Caregiver Assist
  – Especially as children grow
Medical Justification of Bathroom Equipment

• Hygiene is a medical necessity…
  – Skin Integrity, General Health, Requires a Functional Task to Complete
    • Toileting, Showering, Bathing…
• Ability of Child to Partake in ADL Activity
• Supports required for Independence
• Simulation (Trial of Equipment Difficult w/ bath equipment…)
• Examples…
  – Child with fair sitting balance may benefit from low back toilet support and step stool for independent toileting…
  – Child Dependent for All Transfers may need Columbia Elite Bath/Shower Transfer System because lift system does not work in bathroom for transfers…
Benefits to Lift Systems

• Safety of Patient and Caregiver
• Decrease TOTAL number of manual lifts / transfers daily
• Access to multiple positioning devices / floor
• Increased access to community, social activities, family/friends’ home with travel system
Medical Justification of Lift Systems

- Child’s weight >50 lbs
- Risk for Falls / Dependent Lift
- Physiologic issues create unsafe transfers
  - Seizures, Dystonia, Excessive Hypotonia, Spasticity
- Several Positional needs throughout day
  - Lowering to Floor & lifting into bed
- Many times is clinician driven… Families seem to “just have a way” to move child… Nsg needs…
  - Justification that “everyone caring for the child” needs a safe and effective way to transfer
Goals for Positioning & Movement

• Children in GMFCS levels IV and V require adult assistance throughout the day for positioning and movement

• Goals and interventions include:
  – Implementation of a schedule of position changes during daily activities, hygiene times and routines
  – Planned opportunities for movement and aerobic exercise
  – Maintenance of respiratory function as a strategy for prevention of acute illness
  – Promote skin integrity - change position at least every 2 hours

• Provide the child with a variety of positioning options
Medical Justification of Standing Equipment

• Unable to stand or ambulate independently
  – neuromuscular or congenital disorders
  – acquired skeletal abnormalities.
• At high risk for lower-limb or trunk contracture(s), or has contracture(s) that have not improved with other interventions (e.g., stretching, splinting, serial casting, medications, or other modalities)
• The alignment of the patient’s lower extremity is such that the foot and ankle can tolerate a standing or upright position.
• Does NOT have complete paralysis of the hips and legs (Insurance Specific)
• Improvement in mobility, ambulation, function, or physiologic symptoms, or maintained status with the use of the selected stander & is able to follow a routine therapy program incorporating the use of the stander.
• There is a therapy plan outlining the use of the requested stander.

MassHealth - Guidelines for Medical Necessity Determination for Standers
Medical Justification of Hospital Beds

• A **fixed height hospital bed** requires that one or more of the following criteria are met:
  
  – Patient has a medical condition that requires positioning the body in ways not feasible with an ordinary bed.
    • Elevation of the head/upper body less than 30 degrees does not usually require the use of a hospital bed
    • In order to alleviate pain
    • Patient requires the head of the bed to be elevated more than 30 degrees most of the time due to a medical condition (for example, congestive heart failure, chronic pulmonary disease, or problems with aspiration)... Pillows or wedges have been tried / considered
  
  – Patient requires traction or other equipment, that can only be attached to a hospital bed
    • IV poles, Trapeze to A bed mobility, Side Rails to A mobility / Safety where commercial rails will NOT work
Medical Justification of Hospital Beds

• **Variable height hospital bed**
  – Patient requires bed height different from a fixed-height hospital bed to permit transfers to a chair, wheelchair, or standing position.

• **Semi-electric hospital bed**
  – Patient requires frequent changes in body position and/or may need immediate change in body position and that the child / parent is functionally and cognitively able to operate the controls for adjustment, with or without accessories as needed.

• **Total electric hospital bed**
  – Patient meets the criteria for a variable-height hospital bed and semi-electric hospital bed, Child performs stand pivot transfers and caregiver needs elevated surface during day… and that it is the least costly medically appropriate alternative.
Hospital Beds (cont.)

• Pediatric hospital bed or crib (without added safety enclosure)
  – Child meets the criteria for any of the above-mentioned hospital beds.

• Pediatric hospital bed or crib (with added safety enclosure) requires that all of the following criteria are met:
  – Child has a medical condition that puts her or him at risk for falling out of or seriously injuring himself/herself while in an ordinary bed or standard hospital bed (for example, cognitive or communication impairment or a severe behavioral disorder);
  – History of behavior involving unsafe mobility (e.g., climbing out of bed) that puts the child at risk for serious injury while in an ordinary bed or standard hospital bed; or Risk of entrapment; and
  – less costly alternatives (e.g., wearing a protective helmet) were tried and were unsuccessful or contraindicated

• Pressure Relief is not going to be discussed but is important factor…
EXAMPLE OF EQUIPMENT EXPECTATIONS & BLUEPRINT FOR CHILDREN WITH CEREBRAL PALSY

Grouping by Age and GMFCS Levels I – V

Let’s Meet Matthew… 8 years old GMFCS Level III (Video) is 9 months post Bilateral Hamstring, Adductor and Gastroc lengthenings
Motor Growth Curves

- Infant
- Toddler
- Pre School
- Elementary Age
- Middle School
- High School
- Secondary Education
- Adulthood
Goals of Equipment

- Facilitation of Mobility
- Positioning (*base of support, alignment, pressure & balance*)
- Support / Adaptations for temporary or permanent conditions
- Optimization of Function (*Activity & Physiology*)
- Compliance / Acceptance by User/Caregivers
- Secondary Uses
  - Fun, Age Appropriate Peer Interactions
  - Quality of Life (Compliance & Outcomes)

Seating Evaluation and Wheelchair Prescription
Pamela E Wilson, MD, Michelle L Lange, OTR, ABDA, ATP, & Benjamin R Mandac, MD, 2009. e-medicine.
Step One: Interview & Observation

- Collect health information
- Observe Postures and Actions during interview process in current seating system or DME
- Functional Abilities
- Environments Equipment will be used in
- Frequency of need - daily or weekly
Step Two: Physical Examination

• Supine Mat Evaluation
• Seated Evaluation
• Specific Assessments
  – Posture / Alignment
  – Tone
  – Movement Patterns
  – Pressure Map
  – Body Measurements
Summarize Findings

• Put together the clinical picture of this child…
  – Are body segments Fixed, Flexible or Correctable with effort

• Make Recommendations & Trial Equipment in clinic / environment…
OK… I know what this child needs… NOW WHAT?

LETTER OF MEDICAL NECESSITY

www.lmnbuilder.com
(LMN Online Service – FREE)

Many Vendor Specific Samples & Insurance Based Forms
Documentation & Funding

• Who is this person medically, functionally, and socially
• Explain how the seating system will help achieve **functional goals/outcomes**
• Describe trial use of the proposed seating system
• List alternatives that were considered & rejected
  – Both least costly and most costly
• Provide the client's history of equipment compliance
• If needed, present photos & videos to convey the information along with written documentation
• Include supporting material
  – Clinical studies, papers and a resource list
Questions & Discussion

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Useful Starting points…

• Web sites for Options… Resources…
  – www.adaptivemall.com
  – www.nepassage.org/resources.html

• Refurbished Equipment Options (liability)
  – www.kidsmobility.org
  – www.getATstuff.com
  – Local MDA, State & Private Organizations
    • Pass it On, etc.
Despite our best efforts, we can get our equipment denied even if we deem it medically necessary.

If after appeals, phone calls, letters, etc, we still have not received insurance authorization, keep in mind that other local organizations are often willing to assist in purchase of medical equipment.
Appeal Process

• The good news: children are protected under Medicaid programs. Medical care and services must be provided in a manner consistent with the best interests of the Medicaid recipient, 42 USC § 396a(a)(19)

• Every Insurance Carrier has a policy that NEEDS to be followed or appeal is not possible

• Other Considerations – writing to state reps & families contacting state officials.
Alternative Funding

• Foundations
  – Travis Roy Foundation
  – Children’s Hospital Foundations
  – National Associations (BIA)

• Local Charitable Organizations
  – Knights of Columbus
  – Rotary Club

• Personal Fundraisers

• Community Fundraisers, Church Organizations, Employee Fundraisers

• Loaner Programs…
Family Center on Technology and Disability  
http://www.fctd.info/

National Dissemination Center for Children with Disabilities  
http://www.nichcy.org

Center for Implementing Technology in Education  
http://www.cited.org/index.aspx

Assistive Technology in the Classroom  
http://atto.buffalo.edu/registered/ATBasics/Foundation/intro/index.php/

Wisconsin Assistive Technology Initiative  
http://www.wati.org/

Office of Special Education Programs  
http://www.ed.gov/about/offices/list/osers/osep/index.html
Wheelchair University
www.wheelchairnet.org/wcn_wcu/wcu.html

RESNA (Papers & Policies)
www.resna.org/resources/policy,-legislation,-and-regulation.dot

Sunny Hill – Education Module for Wheelchair Prescription

Clinics Corner
www.Clinical-corner.com

Training Module for Transportation of children with Special Needs

Novita Children’s Services